

What is claimed is:

1. An isolated antibody which specifically binds to DR4.
2. The antibody of Claim 1 which is an agonist antibody.
3. The antibody of Claim 1 which is a blocking antibody.
4. The antibody of Claim 1 which is a monoclonal antibody.
5. The antibody of Claim 1 which is a murine antibody.
6. The antibody of Claim 1 which is a humanized antibody.
7. The antibody of claim 1 which is a chimeric antibody.
8. The antibody of claim 1 which is a monomeric antibody.
9. The antibody of claim 1 which is a multivalent antibody.
10. A hybridoma cell line which produces the antibody of Claim 4.
11. The antibody of Claim 4 having the same biological characteristics of (1) the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695; (2) the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694; or (3) the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC ____.
12. The antibody of Claim 4 wherein the antibody binds to the same epitope as (1) the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695 binds; (2) the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under the American Type Culture Collection Accession Number ATCC HB-12694 binds; or (3) the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC ____.
13. The hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695.
14. The hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694.
15. The hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC ____.
16. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695.
17. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694.
18. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC ____.

19. An isolated nucleic acid comprising DNA encoding the DR4 antibody of Claim 1.
20. A composition comprising the antibody of Claim 1 and a carrier.
21. The composition of claim 20 wherein said carrier is a pharmaceutically acceptable carrier.
22. A method of inducing apoptosis in mammalian cancer cells comprising exposing mammalian cells to an effective amount of a DR4 antibody.
23. An article of manufacture, comprising a container and a composition contained within said container, wherein the composition includes a DR4 antibody.
24. The article of manufacture of claim 23 further comprising instructions for using the DR4 antibody *in vivo* or *ex vivo*.
25. A dimeric molecule comprising a DR4 antibody.
26. The dimeric molecule of claim 25 comprising a DR4 antibody linked to a complement molecule.
27. A method of treating cancer in a mammal, comprising administering to said mammal an effective amount of DR4 antibody.
28. The method of claim 27 wherein said DR4 antibody is linked to a heterologous immunoglobulin.
29. The method of claim 27 wherein said DR4 antibody is linked to a complement molecule.
30. The method of claim 27 wherein said cancer is colon cancer.
31. The method of claim 27 wherein said cancer is lung cancer.
32. The method of claim 27 wherein chemotherapy is also administered to said mammal.